

EAST Search History

RCE updated Search
10/771,013

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	23696	sequential adj order	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:02
L2	3006	(primary or second\$4 or master or backup or back-up or (back adj up) or mirror or redundan\$3 or double) with snapshot	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:03
L3	5	L2 same 1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:03
L4	43588	recover\$4 same protect\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:03
L5	1868	writ\$4 same 1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:04
L6	145780	(a adj point adj in adj time) or PIT or APIT or (point adj in adj time)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:04
L7	148	(rewound or rewind\$3) same (L6 or (any adj point adj in adj time) or "any point in time")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:06
L8	4	5 same 4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:06

EAST Search History

L9	0	7 and 4 and 5	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:06
L10	1	5 and 2 and 7	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:07
L11	0	7 same mapp\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:07
L12	791	(714/42).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:07
L13	270	(714/52).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:07
L14	577	(714/13).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:07
L15	1009	(714/15).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:08
L16	992	(714/2).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:08

EAST Search History

L17	1081	(714/5).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:09
L18	481	(714/8).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:08
L19	2988	(707/200).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/05/23 13:08
L20	1962	(707/204).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/05/23 13:08
L21	1179	(707/202).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO	OR	ON	2007/05/23 13:09
L22	434	mapp\$3 adj data adj structure	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:09
L23	0	22 and 7 and 4 and ("714"/\$).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:10
L24	0	22 and 7 and 4 and ("707"/\$).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:10
L25	637	(duplicat\$3 or double) adj write	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:10

EAST Search History

L26	6	(mapp\$3 or mirror or redundan\$3 or double) same (primary or second\$4 or first or backup or back-up) same volumn	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:10
L27	0	L25 and L26 and 7 and ("707"/\$).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:10
S1	10970	recover\$4 near4 continuous\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:03
S2	919	(714/2).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:23
S3	501	(714/13).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:07
S5	2394	(primary or second\$4 or master or backup or back-up or (back adj up) or mirror or redundan\$3 or double) with snapshot	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:36
S6	138486	(a adj point adj in adj time) or PIT or APIT or (point adj in adj time)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 06:54
S7	1	S1 same S5 same S6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 06:54

EAST Search History

S8	4	S1 and S5 and S6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 07:24
S9	54	S5 and S6	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 07:24
S10	20	S9 and recover\$4 and continuous\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 07:25
S11	1	"5673382".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:32
S12	1	"6148412".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:35
S13	1	"6166784".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:36
S14	1	"6266784".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:37
S15	1	"6166784".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:47
S16	1	"6393516".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:47
S17	1	"6266784".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:47
S18	1	"6266784".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:47
S19	1	"6393516".PN.	USPAT; USOCR	OR	ON	2006/07/05 11:47
S20	1	"20040088382".PN.	US-PGPUB	OR	ON	2006/07/05 11:47
S21	1	"20040123029".PN.	US-PGPUB	OR	ON	2006/07/05 11:56
S22	1	"20050010529".PN.	US-PGPUB	OR	ON	2006/07/05 12:01
S23	181	(stager-roger\$ or trimmer-donald\$ or saxena-pawan\$ or johnson-randall\$ or johnston-craig\$ or chang-yafen\$ or blaser-rico\$).ln.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:12

EAST Search History

S24	919	(714/2).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:42
S25	2394	(primary or second\$4 or master or backup or back-up or (back adj up) or mirror or redundan\$3 or double) with snapshot	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 13:09
S26	138486	(a adj point adj in adj time) or PIT or APIT or (point adj in adj time)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:42
S27	54	S25 and S26	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:42
S28	2	S27 and S24	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:43
S29	20	S27 and recover\$4 and continuous\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:44
S30	31	S27 not (S23 or S29)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 12:44
S31	36	S27 and map\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 13:09

EAST Search History

S32	21	S31 and recover\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 13:09
S33	0	S32 not (S29 or S30)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/05 14:35
S34	590	(duplicat\$3 or double) adj write	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:06
S35	6	(mapp\$3 or mirror or redundan\$3 or double) same (primary or second\$4 or first or backup or back-up) same volumn	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 10:54
S36	368	S34 same (mapp\$3 or mirror or redundan\$3 or double)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:38
S37	2	S36 same rewound\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:39
S38	2402	(primary or second\$4 or master or backup or back-up or (back adj up) or mirror or redundan\$3 or double) with snapshot	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:39
S39	138555	(a adj point adj in adj time) or PIT or APIT or (point adj in adj time)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:39

EAST Search History

S40	6	S36 and S38 and S39	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:41
S41	687	(714/42).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:42
S42	941	(714/5).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:42
S43	429	(714/8).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:43
S44	110	delta adj map\$4	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/06 15:44
S45	6	S44 and S38 and S39	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/07/07 09:08
S46	2	("20050010529").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2006/07/07 09:08

EAST Search History

S47	171	("20020016827" "20020026595" "20020144057" "20020166079" "20030004980" "20030037211" "20030120676" "20030188208" "20040015731" "20040181707" "20050010529" "20050063374" "20050065962" "20050066118" "20050066222" "20050066225" "20050076261" "20050076262" "20050076264" "20060047895" "20060047902" "20060047903" "20060047925" "20060047989" "20060047998" "20060047999" "4635145" "4775969" "5438674" "5455926" "5666538" "5673382" "5774292" "5774715" "5805864" "5809511" "5809543" "5854720" "5872669" "5911779" "5949970" "5961613" "5963971" "6021408" "6023709" "6029179" "6041329" "6044442" "6049848" "6061309" "6070224" "6098148" "6128698" "6131142" "6163856" "6173359" "6195730" "6225709" "6247096" "6260110" "6266784" "6269423" "6269431" "6282609" "6289425" "6304880" "6317814" "6324497" "6327418" "6336163" "6336173" "6339778" "6341329" "6343342" "6353837" "6360232" "6389503" "6408359" "6487561" "6499026" "6557089" "6725331" "6779057" "6779058" "6779081" "6816941" "6816942" "6931557" "6950263" "7032126").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 10:52
S48	9435	(mapp\$3 or mirror or redundan\$3 or double) same (data adj structure)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 10:54
S49	142542	(a adj point adj in adj time) or PIT or APIT or (point adj in adj time)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 10:56
S50	4	(rewound or rewind\$3) near3 (S49 or (any adj point adj in adj time) or "any point in time")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:04

EAST Search History

S51	3	S48 same S49	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:00
S52	4221	(duplicat\$3 or double) near2 writ\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:13
S53	10222	continuous\$4 near3 protect\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:07
S54	111	S48 and S49	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:07
S55	7	S54 and S52	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:08
S56	2	S54 and S53	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:09
S57	0	S54 and S47	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:09
S58	6691	(duplicat\$3 or replicat\$3 or mirror\$3 or double) near2 writ\$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:13

EAST Search History

S59	743	(714/42).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:24
S60	982	(714/15).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:27
S61	2749	(707/200).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 13:08
S62	1112	(707/202).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:25
S63	1791	(707/204).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:25
S64	2	S54 and (S59 or S60)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:33
S65	691	(714/7).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:27
S66	551	(714/13).cccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:27

EAST Search History

S67	982	(714/15).ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:27
S68	1	S54 and (S65 or S66 or S67)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:35
S69	3	S54 and (S61 or S62 or S63)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/01/03 11:35

RCE 10/771,613



Welcome United States Patent and Trademark Office

Wed, 23 May 2007, 10:48:34 PM EST

Edit an existing query or compose a new query in the Search Query Display.

Search Query Display

Select a search number (#) to:

- Add a query to the Search Query Display
- Combine search queries using AND, OR, or NOT
- Delete a search
- Run a search

Recent Search Queries

		Results
#1	((continuous data protection<in>metadata) <and> (sequential order<in>metadata))<and> (mapping<in>metadata)	0
#2	((continuous<in>metadata) <and> (data protection<in>metadata))<and> (any point in time<in>metadata)	1
#3	((continuous<in>metadata) <and> (data protection<in>metadata))<and> (any point in time<in>metadata)	1
#4	((sequential order<in>metadata) <and> (mapping data structure<in>metadata))<and> (any point in time<in>metadata)	0
#5	((sequence write<in>metadata) <and> (continuous data protection<in>metadata))<and> (mapping data structure<in>metadata)	0
#6	((duplicate sequence order<in>metadata) <and> (snapshot<in>metadata))<and> (two points in time<in>metadata)	0
#7	((mapping data structure<in>metadata) <and> (any point in time<in>metadata))<and> (sequence write<in>metadata)	0

RCE 10/7715613



Welcome United States Patent and Trademark Office

[Search Session History](#) [BROWSE](#) [SEARCH](#) [IEEE XPLORE GUIDE](#) [SUPPORT](#)

Edit an existing query or compose a new query in the Search Query Display.

Wed, 23 May 2007, 11:03:13 PM EST

Search Query Display

Select a search number (#) to:

- Add a query to the Search Query Display
- Combine search queries using AND, OR, or NOT
- Delete a search
- Run a search

Recent Search Queries

		Results
#1	((mapping<in>metadata) <and> (snapshot<in>metadata)) <and> (any point in time<in>metadata)	0
#2	((continuous data protection<in>metadata) <and> (mapping<in>metadata)) <and> (data structure<in>metadata)	0





Welcome United States Patent and Trademark Office

[AbstractPlus](#)

[BROWSE](#)

[SEARCH](#)

[IEEE XPLORE GUIDE](#)

[SUPPORT](#)

[View Search Results](#)

[e-mail](#) [printer friendly](#)

Access this document

[Full Text: PDF \(370 KB\)](#)

Download this citation

Choose [Citation & Abstract](#)

Download [ASCII Text](#)

[Learn More](#)

[Rights and Permissions](#)

[Learn More](#)

TRAP-Array: A Disk Array Architecture Providing Timely Recovery to Any Point-in-time

[Qing Yang](#) [Weijun Xiao](#) [Jin Ren](#)

Dept. of Electr. & Comput. Eng., Rhode Island Univ., Kingston, RI

This paper appears in: [Computer Architecture, 2006. ISCA '06. 33rd International Symposium on](#)

Publication Date: 2006

On page(s): 289 - 301

Number of Pages: 289 - 301

Location: Boston, MA

ISSN: 1063-6897

INSPEC Accession Number: 9165224

Digital Object Identifier: 10.1109/ISCA.2006.44

Posted online: 2006-07-10 09:48:49.0

Abstract

RAID architectures have been used for more than two decades to recover data upon disk failures. Disk failure is just one of the many causes of damaged data. Data can be damaged by virus attacks, user errors, defective software/firmware, hardware faults, and site failures. The risk of these types of data damage is far greater than disk failure with today's mature disk technology and networked information services. It has therefore become increasingly important for today's disk array to be able to recover data to **any point in time** when such a failure occurs. This paper presents a new disk array architecture that provides timely recovery to **any point-in-time**, referred to as TRAP-array. TRAP-array stores not only the data stripe upon a write to the array, but also the time-stamped exclusive-ORs of successive writes to each data block. By leveraging the exclusive-OR operations that are performed upon each block write in today's RAID4/5 controllers, TRAP does not incur noticeable performance overhead. More importantly, TRAP is able to recover data very quickly to **any point-in-time** upon data damage by tracing back the sequence and history of exclusive-ORs resulting from writes. What is interesting is that TRAP architecture is amazingly space-efficient. We have implemented a prototype TRAP architecture using software at block device level and carried out extensive performance measurements using TPC-C benchmark running on Oracle and PostgreSQL databases, TPC-W running on MySQL database, and file system benchmarks running on Linux and Windows systems. Our experiments demonstrated that TRAP is not only able to recover data to **any point-in-time** very quickly upon a failure but it also uses less storage space than traditional daily differential backup/snapshot. Compared to the state-of-the-art **continuous data protection** technologies, TRAP saves disk storage space by one to two orders of magnitude with a simple and a fast encoding algorithm. From an architecture point of view, TRAP-array opens up another dimension for storage arrays. It is orthogonal and complementary to RAID in the sense that RAID protects data in the dimension along an array of physical disks while TRAP protects data in the dimension along the time sequence.

Index Terms

Inspec

Controlled Indexing

[RAID](#) [back-up procedures](#) [security of data](#) [system recovery](#)

Non-controlled Indexing

[Linux](#) [MySQL database](#) [Oracle database](#) [PostgreSQL databases](#) [RAID architectures](#) [TPC-C benchmark](#) [TRAP architecture](#) [TRAP-array](#) [Windows systems](#) [data damage](#) [data protection technology](#) [defective software/firmware](#) [disk array architecture](#) [disk failures](#) [disk storage space](#) [disk technology](#) [file system benchmarks](#) [hardware faults](#) [networked information services](#) [site failures](#) [user errors](#) [virus attacks](#)

Author Keywords

Not Available

References

RCE 10/771,613



[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

Search: ☒ The ACM Digital Library ☐ The Guide

continuous protection and sequential order and (primary or se

SEARCH

[Feedback](#) [Report a problem](#)

Terms used

continuous protection and **sequential order** and **primary** or **secondary** or **master** or **backup** or **redundant** and **mapping** and **rev**

Sort results by

Display results

[Save results to a Binder](#)

[Search Tips](#)

☐ [Open results in a new window](#)

[Try an Advanced](#)
[Try this search in](#)

Results 1 - 20 of 200

Result page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

Best 200 shown

1 [Classics in software engineering](#)

January 1979 Divisible Book

Publisher: Yourdon Press

Full text available: [pdf\(22.45 MB\)](#)

Additional Information: [full citation](#), [cited by](#), [index terms](#)

2 [Compiler construction: an advanced course](#)

F. L. Bauer, F. L. De Remer, M. Griffiths, U. Hill, J. J. Horning, C. H. A. Koster, W. M. McKeeman, P. C. Poole, W. M. January 1974 Book

Publisher: Springer-Verlag New York, Inc.

Full text available: [pdf\(65.62 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#)

The Advanced Course took place from March 4 to 15, 1974 and was organized by the Mathematical Institute of the Leibniz Computing Center of the Bavarian Academy of Sciences, in co-operation with the European Community Research and Technology of the Federal Republic of Germany and by the European Research Office, London.

3 [Selected writings on computing: a personal perspective](#)

Edsger W. Dijkstra

January 1982 Book

Publisher: Springer-Verlag New York, Inc.

Full text available: [pdf\(60.98 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)

Since the summer of 1973, when I became a Burroughs Research Fellow, my life has been very different from w routine changed: instead of going to the University each day, where I used to spend most of my time in the com one day a week and was most of the time that is, when not travelling!-- alone in my study. In my solitude, mail more and more important. The circumstance that my employe ...

4 [The multics system: an examination of its structure](#)

Elliott I. Organick

January 1972 Book

Publisher: MIT Press

Full text available: [pdf\(23.94 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#), [index terms](#)



[Subscribe](#) (Full Service) [Register](#) (Limited Service, Free) [Login](#)

Search: ☒ The ACM Digital Library ☐ The Guide

[Feedback](#) [Report a problem](#)

Terms used

continuous protection and **sequential order** and **primary** or **secondary** or **master** or **backup** or **redundant** and **mapping** and **rev**

Sort results by

Display results

[Save results to a Binder](#)

[Search Tips](#)

☐ [Open results in a new window](#)

[Try an Advanced](#)
[Try this search in](#)

Results 81 - 100 of 200
Best 200 shown

Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) **5** [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

81 [Third Generation Computer Systems](#)

Peter J. Denning
December 1971 **ACM Computing Surveys (CSUR)**, Volume 3 Issue 4

Publisher: ACM Press

Full text available: [pdf\(3.52 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

The common features of third generation operating systems are surveyed from a general view, with emphasis on those features which constitute at least the basis for a "theory" of operating systems. Properties of specific systems are not discussed. Technical aspects of issues and concepts are stressed, the nontechnical aspects mentioned only briefly. A performance model of such systems is presumed.

82 [Genesis: a distributed database operating system](#)

Thomas W. Page, Matthew J. Weinstein, Gerald J. Popek
May 1985 **ACM SIGMOD Record , Proceedings of the 1985 ACM SIGMOD international conference on database management systems**, Volume 14 Issue 4

Publisher: ACM Press

Full text available: [pdf\(1.48 MB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

83 [Pen computing: a technology overview and a vision](#)

André Meyer
July 1995 **ACM SIGCHI Bulletin**, Volume 27 Issue 3

Publisher: ACM Press

Full text available: [pdf\(5.14 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

This work gives an overview of a new technology that is attracting growing interest in public as well as in the corporate world. The difference from other technologies is in the use of a pen or pencil as the primary means of interaction between a user and a familiar pen and paper interface metaphor. From this follows a set of consequences that will be analyzed and put into perspective. Technologies and visions. Starting with a short historic ...

84 [Loopback recovery from double-link failures in optical mesh networks](#)

Hongsik Choi, Suresh Subramaniam, Hyeong-Ah Choi
December 2004 **IEEE/ACM Transactions on Networking (TON)**, Volume 12 Issue 6

Publisher: IEEE Press

Full text available: [pdf\(505.00 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)



[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)

Search: ☒ The ACM Digital Library ☐ The Guide

continuous protection and sequential order and (primary or se



[Feedback](#) [Report a problem](#)

Terms used
continuous protection and sequential order and primary or secondary or master or backup or redundant and mapping and rev

Sort results by

[Save results to a Binder](#)

[Try an Advanced](#)
[Try this search in](#)

Display results

[Search Tips](#)

☐ [Open results in a new window](#)

Results 161 - 180 of 200

Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) **[9](#)** [10](#) [next](#)

Best 200 shown

161 [Performing remote operations efficiently on a local computer network](#)

Alfred Z. Spector
April 1982 **Communications of the ACM**, Volume 25 Issue 4

Publisher: ACM Press

Full text available: pdf(1.58 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

A communication model is described that can serve as a basis for a highly efficient communication subsystem for taxonomy of communication instructions that can be implemented efficiently and can be a good basis for interpreting communication instructions, called remote references, cause an operation to be performed by a remote process returned. This paper also presents implementation considerations.

Keywords: communication models, efficient communication, transactions

162 [Potpourri: Fast and transparent recovery for continuous availability of cluster-based servers](#)

Rosalia Christodouloupoulou, Kaloian Manassiev, Angelos Bilas, Cristiana Amza
March 2006 **Proceedings of the eleventh ACM SIGPLAN symposium on Principles and practice of parallel programming**

Publisher: ACM Press

Full text available: pdf(111.02 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Recently there has been renewed interest in building reliable servers that support continuous application operation consistent after a failure, one of the main challenges in achieving continuous operation is to provide fast reconfiguration mechanisms employed and their overheads depend on the type of platform that is being used as that need to be supported. In this paper we focus on...

Keywords: availability, distributed shared memory, fast failure reconfiguration, fault tolerance, scalability

163 [Multithreading I: Master/slave speculative parallelization](#)

Craig Zilles, Gurindar Sohi
November 2002 **Proceedings of the 35th annual ACM/IEEE international symposium on Microarchitecture**

Publisher: IEEE Computer Society Press

Full text available: pdf(1.31 MB) [Publisher Site](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Master/Slave Speculative Parallelization (MSSP) is an execution paradigm for improving the execution rate of sequential code speculatively for execution on a multiprocessor. In MSSP, one processor---the master---executes an approximation of the code...

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	789	(714/42).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L2	270	(714/52).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L3	577	(714/13).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L4	749	(714/15).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L5	657	(714/2).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L6	1047	(714/5).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L7	481	(714/8).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:13
L8	2988	(707/200).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:14
L9	1962	(707/204).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:14
L10	1179	(707/202).ccls.	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:14
L11	2783	(primary or second\$4 or master or backup or back-up or (back adj up) or mirror or redundan\$3 or double) with snapshot	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:14
L12	5778	(duplicat\$3 or replicat\$3 or mirror\$3 or double) near2 writ\$3	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:15
L13	50	continuous adj data adj protection	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:15
L14	403	mapp\$3 adj data adj structure	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:16

EAST Search History

L15	21917	sequential adj order	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:17
L16	2	any adj point adj in adj time	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:18
L17	9	11 and 12 and 13	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:18
L18	2	17 and 14 and 15	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:18
L19	0	18 and 16 and 1	US-PGPUB; USPAT; USOCR	OR	ON	2007/05/23 23:19
L20	11	11 and 12 and 10 and (2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2007/05/23 23:20